

# **NETWORK CONNECTING WIRE STRUCTURE**

## **BACKGROUND OF THE INVENTION**

### **1. Field of the Invention**

The present invention relates to a network connecting wire structure,  
5 and more particularly to a network connecting wire structure having a switch  
that can be used to change the connecting states between two connecting plugs,  
so that the network connecting wire structure is available for requirements of  
different functions.

### **2. Description of the Related Art**

10 A conventional network connecting wire can be used to connect two  
computers or connect multiple computers to the network. The conventional  
network connecting wire usually has two specifications, one of which is  
available for connection of the personal computer and a network connecting  
device, such as the hub, cable modem or the like so as to connect the personal  
15 computer to the LAN (local area network) or the internet, and the other has a  
cross-over structure and is available for connecting two personal computers.

However, the conventional network connecting wires having two  
different specifications cannot be commonly used with each other because of  
different connecting states of two connecting plugs at the two ends of the  
20 conventional network connecting wires. Thus, a user has to prepare two  
network connecting wires having two different specifications so as to connect

the personal computer to the LAN (local area network) or the internet, and to connect two personal computers.

### **SUMMARY OF THE INVENTION**

The primary objective of the present invention is to provide a  
5 network connecting wire structure having a switch that can be used to change the connecting states between two connecting plugs, so that the network connecting wire structure is available for requirements of different functions.

Another objective of the present invention is to provide a network connecting wire structure that is available for connection of multiple personal  
10 computers and multiple network connecting devices, such as the hub, cable modem or the like and is also available for connecting two personal computers, thereby enhancing the versatility of the network connecting wire structure.

A further objective of the present invention is to provide a network connecting wire structure that is available for connection of multiple personal  
15 computers and multiple network connecting devices, and is also available for connecting two personal computers, thereby decreasing costs of fabrication of the network connecting wire structure.

In accordance with the present invention, there is provided a network connecting wire structure, comprising:

- 20 a network line;
- a first connecting plug mounted on a first end of the network line;

a second connecting plug mounted on a second end of the network line; and

a switch mounted between the first connecting plug and the second connecting plug.

5 Further benefits and advantages of the present invention will become apparent after a careful reading of the detailed description with appropriate reference to the accompanying drawings.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is a perspective view of a network connecting wire structure in  
10 accordance with the preferred embodiment of the present invention;

Fig. 2 is a plan cross-sectional view of the network connecting wire structure as shown in Fig. 1; and

Fig. 3 is a perspective view of a network connecting wire structure in accordance with another embodiment of the present invention.

### **DETAILED DESCRIPTION OF THE INVENTION**

15 Referring to the drawings and initially to Figs. 1 and 2, a network connecting wire structure in accordance with the preferred embodiment of the present invention comprises a network line 1, a first connecting plug 2 mounted on a first end of the network line 1, a second connecting plug 3  
20 mounted on a second end of the network line 1, and a switch 4 mounted between the first connecting plug 2 and the second connecting plug 3.

The network line 1 is a signal line of a Ethernet having a specification of RJ45.

The first connecting plug 2 is a male connector having a specification of RJ45 for insertion into a female connector having a specification of RJ45.

5 The first connecting plug 2 has an inside provided with a plurality of conducting terminals 22.

The second connecting plug 3 is a male connector having a specification of RJ45 for insertion into a female connector having a specification of RJ45. The second connecting plug 3 has an inside provided  
10 with a plurality of conducting terminals 32.

The switch 4 is provided with a push button 41 to switch the connecting states between the conducting terminals 22 of the first connecting plug 2 and the respective conducting terminals 32 of the second connecting plug 3. In the preferred embodiment, the switch 4 is integrally combined with  
15 the first connecting plug 2.

When in use, the first connecting plug 2 is inserted into a first female connector having a specification of RJ45, and the second connecting plug 3 is inserted into a second female connector having a specification of RJ45. At this time, the push button 41 of the switch 4 is movable between a first position and  
20 a second position.

When the push button 41 of the switch 4 is located at the first position, the conducting terminals 22 of the first connecting plug 2 and the respective

conducting terminals 32 of the second connecting plug 3 are connected symmetrically, thereby forming a network line without producing cross-over, so that the network connecting wire structure is available for connection of multiple personal computers and multiple network connecting devices, such as the hub, cable modem or the like to connect the personal computers to the LAN (local area network) or the internet.

When the push button 41 of the switch 4 is located at the second position, the connecting states between the conducting terminals 22 of the first connecting plug 2 and the respective conducting terminals 32 of the second connecting plug 3 are changed, thereby forming a network line producing cross-over, so that the network connecting wire structure is available for connecting two personal computers.

Accordingly, the network connecting wire structure is available for connection of multiple personal computers and multiple network connecting devices, such as the hub, cable modem or the like, and is also available for connecting two personal computers, thereby enhancing the versatility of the network connecting wire structure. In addition, the network connecting wire structure is available for connection of multiple personal computers and multiple network connecting devices, and is also available for connecting two personal computers, thereby decreasing costs of fabrication of the network connecting wire structure.

Referring to Fig. 3, in accordance with another embodiment of the present invention, the switch 40 is mounted on a mediate portion of the network line 1 and located between the first connecting plug 2 and the second connecting plug 3.

5           Although the invention has been explained in relation to its preferred embodiment(s) as mentioned above, it is to be understood that many other possible modifications and variations can be made without departing from the scope of the present invention. It is, therefore, contemplated that the appended claim or claims will cover such modifications and variations that fall within the  
10   true scope of the invention.